

Amendments to Specification

Please replace paragraph [0013] with the following amended paragraph:

[0013] U.S. patent application Ser. No. 10/039,992, now U.S. Patent No. 7,032,072, in the name of Michael J. Quinn and Mary L. Laier, entitled "Method and Apparatus for Fast Lookup of Related Classification Entities in a Tree-Ordered Classification Hierarchy;"

Please replace paragraph [0020] with the following amended paragraph:

[0020] U.S. patent application Ser. No. 10/676,631 ~~10/676,632~~, in the name of Roopesh Varier, Guy Riddle, and David Jacobson, entitled "Dynamic Bandwidth Management Responsive to Access Link State in Redundant Network Topologies."

Please replace paragraph [0040] with the following amended paragraph:

[0040] As discussed more fully below, traffic management device 30, in one implementation, is operative to detect and classify data flows, and manage bandwidth utilization across access link 21. A variety of deployment configurations are possible. Figures 1 and 2 show deployment of traffic management device 30 deployed between router 22 and a first network 40 (comprising a hub, switch, router, and/or a variety of combinations of such devices implementing a LAN or WAN) interconnecting two end-systems (here, client computer 42 and server 44). Alternatively, in other implementations, traffic management device 30 may be disposed in the communication path between access link 21 and router 22. In other embodiments, multiple traffic management devices can be disposed at strategic points in a given network infrastructure to achieve various objectives. For example, the traffic monitoring

functionality described herein may be deployed in multiple network devices and used in redundant network topologies by integrating the network traffic synchronization functionality described in U.S. Application Ser. No. 10/611,573, incorporated by reference above. Still further, the present invention can be deployed in a network environment comprising a plurality of redundant access links, conceptually aggregated into a virtual access link for the purposes of billing and administration. Application Ser. No. 10/676,631 ~~10/676,632~~ discloses the aggregation of multiple access links into a single virtual access link. Still further, traffic management devices 30 may operate substantially independently, or cooperate with traffic management devices deployed at the edge of networks 40a, 40b to provide an end-to-end system that manages bandwidth utilization. For example, assuming that access links 21, 21a are dedicated only to network traffic between networks 40, 40a, traffic management devices 30, 30a can be configured to control bandwidth utilization only as to outbound data flows.

Please replace paragraph [0053] with the following amended paragraph:

[0053] A traffic class comprises a set of matching rules or attributes allowing for logical grouping of data flows that share the same characteristic or set of characteristics—e.g., a service ID or type (see Section A.1., above), a specific application, protocol, IP address, MAC address, port, subnet, etc. In one embodiment, each traffic class has at least one attribute defining the criterion(ia) used for identifying a specific traffic class. For example, a traffic class can be defined by configuring an attribute defining a particular IP address or subnet. Of course, a particular traffic class can be defined in relation to a plurality of related and/or orthogonal data flow attributes. U.S. Patent Nos. 6,412,000 and 6,591,299, and 7,032,072 ~~U.S. patent application Ser. No. 10/039,992~~ describe some of

the data flow attributes that may be used to define a traffic class, as well as the use of hierarchical classification structures to associate traffic classes to data flows. In one embodiment, traffic management device 30 includes functionality allowing for classification of network traffic based on information from layers 2 to 7 of the OSI reference model. Traffic management device 30 can be configured to include matching rules that define a plurality of network applications commonly found in enterprise networks, such as database applications, Citrix® flows, ERP applications, and the like.